

METZ 7C

SODIUM SILICATE CEMENT



DESCRIPTION:

METZ 7C is a 2-part sodium silicate based, acid resisting cement used in the laying of acid proof ceramic bricks or tiles for acid proof structures and linings. It can also be used in various applications for bonding ceramics, glass and metal.

FEATURES AND BENEFITS:

- **Excellent Acid Resistance**
Resistant to most acids in all concentrations except hydrofluoric, as well as most solvents, oils and greases.
Note: Can be affected by concentrated sulphuric acid under some conditions.
- **Excellent Adhesion**
Exhibits good adhesion to ceramics, glass and metal.
- **High Service Temperature**
May be used for temperatures up to 950°C.
- **Fire and thermal shock resistant**

RECOMMENDED:

- As a bonding cement for acid brick and tile installations.
- For cementing of ceramic, glass and metal components in high temperature and/or acidic environments.

NOT RECOMMENDED:

- Exposure to hydrofluoric acid or fluoride salts.
- Exposure to alkaline solutions of any kind (i.e. any solution in pH range of 7-14).
- Exposure to water (without prior acid treatment).

PHYSICAL PROPERTIES:

	(Typical Values)
Temperature Limit:	950°C
Density:	1.9 - 2.0 g/cm ³
Compressive Strength (28 days):	20 MPa
Absorption:	14%
Bond Strength to Unglazed Ceramic:	17 kg/cm ²

COVERAGE:

Theoretical quantities (allow for wastage)

For fully bedding and jointing (nominal 3mm joint) Nori acid brick 220 x 105 x 75mm - 0.3 kg per brick

For cementing components - 1.95 kg per sq m per mm of thickness

APPLICATION TEMPERATURE:

The recommended temperature range for application of METZ 7C is 10°C to 30°C.

At temperatures below 10°C, curing may be inhibited and final technical properties may be affected.

At temperatures above 30°C consistency and setting rates may be affected.

If necessary consult METZ.



Acid Proofing & Industrial Flooring • Specialty Ceramic Tiles



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INSTRUCTIONS FOR USE

1. Temperature of Working Area

Maintain a temperature of between 10°C and 30°C on the METZ 7C components, brick and substrate during mixing and application. Air temperature in the area where the METZ 7C is to be applied should also be between 10°C and 30°C. At temperatures below 10°C, METZ 7C will not cure properly. Consult METZ if temperature cannot be maintained above 10°C.

At temperatures above 30°C initial set will take place too rapidly. This difficulty can be overcome by mixing in a cooler area, or by cooling the mixing equipment with ice water, and by cooling the METZ 7C components.

2. Surface Preparation

All surfaces to be clean and dry. METZ 7C will not adhere adequately to concrete surfaces. These surfaces should first be coated with a membrane. The type of membrane will depend on physical and chemical conditions. Please consult METZ for recommendations.

Bricks and tiles should be dry.

3. Mixing

a) *Mixing Equipment*

Mechanical mixing is recommended. A low speed mixer or a heavy duty drill with a suitable mixing paddle can be used. Small quantities can be mixed by hand, using a trowel or spatula.

b) *Mixing Proportions*

	<u>By Weight</u>	<u>By Volume</u>
Liquid	1.0	1.0
Powder	2.8	2.8

Note:

(i) The powder proportion may be varied to suit requirements. Do not reduce powder content below 2 parts to 1 part liquid by weight.

c) *Mixing Procedure*

Place liquid in mixing vessel. Add powder gradually with constant stirring.

d) *Pot Life*

30 minutes at 20°C with normal hardener proportion.

e) *Clean Up*

Use water to clean up uncured material.

4. Installation

Bricks or tiles should be buttered with METZ 7C using a trowel and well beaten down. Joints should be kept to minimum width possible, usually 3 to 4.5mm. Ensure there are no voids.

Initial set at 20°C	2 hours
Final set at 20°C	24 hours
Full cure at 20°C	4 to 5 days

Times will vary dependent on average ambient temperature.

5. Acidification of Set Joints

Protect joints from water, steam, chemicals and temperatures below 10°C until cement has achieved final set. After final set treat the joint surface with a solution of:

- 2 volumes water
- 1 volume commercial strength hydrochloric acid.

Acidification of the joint is intended to provide protection to the joint surface only, until the lining is placed into service. The joints must not be immersed in neutral or alkaline solutions.

6. High Temperature Use

If METZ 7C is to be exposed to elevated temperatures, a drying schedule should be followed. Consult METZ for details.

7. Storage

a) *Liquid*

Protect from freezing temperatures.
If stored for long periods, remix thoroughly before use.

b) *Powder*

Keep dry.

8. Safety Precautions

a) *Liquid*

Use chemical goggles, PVC gloves and barrier cream.

b) *Powder*

Use dust respirator and chemical goggles.

For full safety precautions refer to the Material Safety Data Sheet for each component.

Always ensure you have the latest data sheet version, refer www.metz.net.au

- The customer must comply strictly with the instructions contained in this product data sheet. Metz is not responsible for any advice or variations to this data sheet which are not confirmed in writing.
- If the customer has a claim against Metz in respect of any product supplied to the customer by Metz whether due to a fault in the product or the negligence or breach of contract by Metz or for any other reason:
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METZ SPECIALTY MATERIALS PTY LTD

A.C.N. 140 636 639

15A Stanton Road, Seven Hills NSW 2147
Facsimile: (02) 9671 4292 Phone: (02) 9671 1311

6 University Place, Clayton North, VIC 3168
Facsimile: (03) 9561 6944 Phone: (03) 9561 6144

Unit 16, 42 Smith Street, Capalaba QLD 4157
Facsimile: (07) 3823 5552 Phone: (07) 3823 5555

Distributor